

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Implementation of the)	
Middle Class Tax Relief and Job Creation)	CC 94-102
Act of 2012)	WC 04-196
Provisions Concerning)	PS 07-114
Multi-Line Telephone Systems)	PS 10-255

COMMENTS OF AVAYA, INC.

AVAYA, Inc. respectfully submits the following comments in response to the Commission's *Notice of Inquiry* ("NOI") in the above-referenced proceeding¹.

COMMENTS

As a leading global manufacturer of Multiline Telephone Systems and Public Safety Solutions, Avaya is pleased to provide leadership and guidance to the Commission regarding the E9-1-1 functionality requirements for MLTS systems. Avaya believes that in addition to cost efficient solutions, the need for continuing public education on E9-1-1 is a critical step in remediating the problem of communicating insufficient information from MLTS users as the result of an inability to transmit real-time location information using today's analog based E9-1-1 network. Given the fact that the issue of location discovery and reporting of telephone endpoints behind an MLTS still exists, and has persisted for the past decade and a half, there remains clear and present evidence that existing state legislation has not been effective in driving

¹ Public Safety and Homeland Security Bureau Seeks Comment on Multiline Telephone Systems Pursuant to the Next Generation 911 Advancement Act of 2012; Request for Comments, CC Docket No. 94-102, WC Docket No. 05-196, PS Docket No. 07-114, PS Docket No. 10-255

remediation and compliance. To date (July 5, 2012), only 18 states have MLTS legislation in place. When examined comparatively, the legislative requirements vary greatly, and present significant challenges to the enterprise administrator. Proper guidance and enforcement is needed at a federal level to ensure that the public is protected as technology expands the reach of corporate communications. Precious minutes, and even lives, have been lost, where simple and cost-effective steps could have been taken to mitigate and potentially avert a tragic outcome.

One specific example that comes to mind was that of the office worker in Gaithersburg, MD who suffered a heart attack at his desk. Unable to communicate his location, the victim was unable to be located promptly when seconds counted most. First responders only had the main address of the company to go by, and arrived on scene just moments later. Unfortunately, despite their quick response, no one was aware that the emergency call had taken place, and it was assumed to be a “glitch” in the system.

It was reported that 10 hours later, cleaning personnel found the individual slumped under his desk, dead in the office directly across the street from the main address that the first responders received. In this case, emergency first responders were only yards away from the victim, but had no information regarding his exact location.²

Had there been situational awareness on site that an emergency call had been placed, and that the call had come from a precise and defined location in the building(s), it is certainly possible that the outcome would have been different. Although every scenario or complex situation will present its own challenges, providing some level of awareness and useful and accurate location information is critical to establish and

² Londono, Ernesto. "Man Found Dead in Office 10 Hours After 911 Phone Glitch Confuses Rescuers." Washington Post (2006) July 5, 2012 < <http://www.washingtonpost.com/wp-dyn/content/article/2006/04/20/AR2006042001923.html>>.

maintain a safe work environment in today's enterprise. Avaya strongly believes this effort begins with some level of on-site notification of emergent events.

I. II. Feasibility of MLTS Manufacturers to Provide 911 Location Information.

MLTS communications systems provide the backbone communications network used in enterprise environments today. Although the desktop device is in a state of constant evolution, the core of the network retains call processing functionality and feature sets, ultimately creating the user experience. As user endpoints, devices and systems become more IP-centric, the mobility of the user becomes problematic for first responders.

Historically, a location has been tied to a telephone number. Today's enterprise networks are increasingly "location aware." Common standard mechanisms can be deployed and/or enabled to identify a specific VoIP endpoint and its location.³ In the past, the primary cost to deliver MLTS E9-1-1 was in managing and synchronizing the internal databases with those externally used by Public Safety.

Additionally, specific caller location information, i.e. the cubicle or room number, has been stored in the NENA-II Location Field⁴. With this field being limited to 20 characters, enterprise administrators are challenged to accurately describe location details in a form that is non-cryptic to the E9-1-1 call taker. Although identifying information such as "**Room 2C231**" has meaning internally, it has little to no meaning to the E9-1-1 call taker, or the E9-1-1 dispatcher. Based on conversations with representatives from within the Public Safety industry, Avaya's staff believes that this critical location information is rarely passed along to emergency service responders,

³ NENA Data Technical Committee (Multi-Line Telephone Systems Model Legislation Working Group), *NENA Technical Requirements Document on Model Legislation E9-1-1 of Multi-Line Telephone Systems* at * (v.2 Feb. 5, 2011).

⁴ NENA. NENA Standard Data Formats For ALI Data Exchange & GIS Mapping. June 10, 2009. July 5, 2012. <http://www.nena.org/resource/collection/6366E817-C855-4776-AF3A-F9F715D1AF12/NENA_02-010-v-8.2_Data_Formats_for_ALI_MSAG_GIS.pdf>.

most often because it is unknown. In those cases where location information is passed along, it is rarely used because floor plan details, room numbering schemas and other details are rarely available—or intelligible-- to first responders.

Processing the E9-1-1 call quickly and efficiently coupled with on site situational awareness simplifies the emergency response process both to Public Safety and the enterprise by coordination of information to and between the relevant parties.

II. III. Technology Developments Have Decreased the Complexity Necessary to Deliver MLTS E9-1-1.

Legacy digital and analog devices, although static in nature, need to be manually tracked during move, add, change (MAC) events. IP endpoints, although highly nomadic in nature, are easily identifiable on the data network via several standards-based discovery mechanisms. Quite often this functionality already exists in an enterprise network, and is used by the IT department to track other devices. Utilizing this information and location awareness internally, specific device locations can be monitored. Should a device be used to initiate an emergency call to 9-1-1 or any other defined number, an internal alert to individuals who are trained and responsible can be initiated.

This approach accomplishes two primary goals. Immediate help is summoned to individuals close to the emergent event, and situational awareness is provided so that when Public Safety arrives on scene, they are expected, and steps can already have been taken to permit unobstructed access to the area of the emergent event. By using this methodology, updates to the Public Safety Automatic Location Information (ALI) database can be significantly minimized or eliminated, which makes the solution less complex, and more cost effective.

IV. Inclusion of mechanisms for caller location.

Manufacturers can easily include the functionality of providing an event-driven notification of an emergency call being placed. The event notification can contain specific details of the originating station, or be as simple as a “network trap” with basic endpoint identification to an external system or process. This is congruent with the common topologies found in the market today, where the extended system E9-1-1 functionality is commonly found in an off-board application. Several products from multiple vendors currently exist in the market place, with cost points of as little as \$4,000 for onsite notification.⁵

V. Feasible Timeline to Deliver Mechanism for Caller Location.

Given the relatively simple technology and wide availability of on-site notification functionality across most vendor platforms, in addition to the low cost of deployment, Avaya urges the Commission to implement requirements for on-site notification as soon as feasible, with added functionality phased in over time. Not only could this situational awareness provide accurate alerting information to local on-site responders, but additional display monitors can be easily deployed in predefined areas of the building, similar to fire alarm panels, that display the appropriate location information as well as other useful contextual information such as material safety data sheets, fire alarm sensor status or any other data relevant to the emergent event.

VI. Establishing the Number of Firms Currently Delivering E9-1-1 Service in the MLTS.

Based on its own customer contact information, Avaya estimates that 70% of the MLTS systems do not have E9-1-1 deployed in their facilities to a level that would meet the minimum standards previously cited in this document. Much of this is the result of

⁵ In its current price book, the Conveyant Systems, Inc., SENTRY™ On Site Notification application has a starting retail price of \$3995 <http://www.conveyant.com/prod/e911_sol.htm>

lack of meaningful education on the problem, the lack of testing standards, as well as the lack of any enforcement mechanism and penalties for non-compliance. Since the publication of the NENA Model MLTS Legislation, several states have enacted laws including Virginia, Massachusetts and most recently, Michigan.⁶ Based on guidance provided by industry experts, the Michigan PUC elected to add penalties of \$500 to \$5,000 for non-compliance of their MLTS legislation. Although this legislation took effect on January 1, 2012, entities within Michigan have a 5-year window to become compliant.

Again, based on customer contact, Avaya has determined that there is a significant interest from MLTS operators to examine their configurations and determine their compliance levels. Based on discussions with administrators and compliance officials within the enterprises, the mere potential of a penalty assessment encouraged compliance efforts.

VII. Projected Growth in Use of MLTS.

As enterprises flatten, consolidate and extend their network architectures, users become highly nomadic in nature. Widespread broadband connectivity allows workers to connect from any place, and with any device, thus increasing the E9-1-1 location management problem.

VIII. The Number of MLTS 911 Calls That Are Placed Annually.

Industry estimates place the number of calls to 9-1-1 to be 240,000,000 to 300,000,000 annually.⁷

⁴ NENA. MLTS/PBX - State Legislation. 2012. July 5, 2012. < http://www.nena.org/?MLTS_PBX_Legislation>.

⁷ Dispatch Magazine Online. The Briefing Book. July 5, 2012
<http://www.911dispatch.com/info/fact_figures.html>

IX. Comment on the Appropriate Manner to Calculate the Benefits That Would Result from Extending E911 Service Requirements to MLTS.

Avaya has no specific input on this request at this time other than what is otherwise provided in this document.

X. Comment on how these intangibles should be accounted for in any analysis.

Avaya has no specific input on this request at this time other than what is otherwise provided in this document.

XI. Comment on those recommendations and on the NENA Model Legislation more generally.

“What is the law?” This single question is the most frequently posed question by MLTS administrators. 18 states have some level of regulation, or mention of MLTS E9-1-1 requirements. However, there is great variation from state to state. The most common disparity is the level of location granularity required for E9-1-1 caller location reporting to Public Safety. Emergency Response Location (ERL) sizing varies from 40,000 sq. ft. to as little as 7,000 sq. ft. As many enterprise users adopt the practice of flatten, collapse and extend (FCE), E9-1-1 services become problematic. Without a common level of E9-1-1 reporting across the US, there is the constant confusion and turmoil regarding what level of compliance is required, and where.

Basic E9-1-1 awareness provided by On Site Notification, if required in Part 68 rules, would provide a minimum level of feature expectancy that could dramatically decrease response times.

XII. Information on Related Standards Efforts.

The NENA Technical Standard Document on Detailed Functional and Interface Specification for the NENA i3 Solution – Stage 3 NENA 08-003 defines the Next Generation architecture.⁸ This standard provides the framework for an IP based

⁸ NENA. Detailed Functional and Interface Standards for the NENA i3 Solution. 2012. July 5, 2012. <http://www.nena.org/?page=i3_Stage3>.

Emergency Services IP Network (ESInet) that provides intelligent connectivity to Public Safety. Although no specific mention of MLTS exists in this version of the document, Avaya believes MLTS connectivity resides in the spirit of this document.

XIII. The Need for Additional Standards.

As has been stated previously, the current lack of standards has created confusion and inconsistencies within the industry. States have been slow to react to the issues for the last decade. The problem is clear, and the solution is not complex or cost prohibitive; yet the lack of awareness and the clear mandate to remediate allows this problem to linger while offering little to no resolution. Enterprises no longer conform to geographic boundaries. Increasing numbers of employees and contractors work from home, or other remote locations. The existing E9-1-1 network is unable to handle direct location data from the enterprise, therefore leaving a gap that can easily be closed with detailed information delivered to first responders upon arrival at the scene.

XIV. Commission adoption of deadlines/timetables for the implementation of standards?

Without clear deadlines and timetables, the industry will not respond. This has clearly been proven over the last decade with only a handful of manufacturers addressing the problem. Adopting specific deadlines, and requiring systems to be compliant by a certain date are the incentives needed for the manufacturers to complete feature functionality. Additional functionality can be deferred until a later point in time, if and when the basic On Site Notification functionality is made a requirement.

CONCLUSION

The Commission should report to Congress that it is feasible for MLTS manufacturers to include E9-1-1 location capabilities within their products and service offerings, and should begin a rulemaking to require such inclusion as defined by NENA.

Respectfully submitted,

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